NATIONAL WEATHER SERVICE

Western Region Notes

AUGUST 12, 2004

REGIONAL DIRECTOR'S OFFICE

Western Region Cline Award winners: Congratulations to the Western Region Cline Award winners. Competition in several of the categories was very strong this year, and it was difficult to pick the winners. The following individuals were chosen as the regional level winners and will go on to compete at the national level for a trophy and nice cash award. The winners are:

Engineering, Electronics, and Facilities — *Curtis Lutz, WFO Monterey*: Curtis managed the entire operations of the electronics staff while the ESA position was vacant. He also managed the Marine Stratus Initiative, which is a highly visible program with the airlines and the FAA.

Support Services — *Vickie Stephenson, WFO Billings*: Vickie has demonstrated high productivity, exceptional innovation, technical proficiency, and teamwork in her support of Billings. She has been a resource to the other field offices and the Administrative Management Division at Western Region Headquarters.

Program Management — *Tyree Wilde, WFO Portland*: Tyree has shown exceptional leadership in managing the installation of two NWR installations, organizing several outreach events including WeatherFest at the national AMS conference, and leading one of the Western Region Digital Services teams.

Hydrology — *Mike Schaffner, WFO Tucson*: Mike distinguished himself as an expert in burn area hydrology in the Western U.S. and has provided critical guidance to local, state, and federal officials during flash flood episodes in those burn areas. Mike is working with other WFOs to help them when wildfires occur in their county warning area.

Meteorology — *Paul Tolleson, WFO Portland*: Paul's expertise in WWA has enabled him to help both regional and national headquarters in developing and testing WWA, and late in 2003 Paul helped test the OB2.2 version of the software. Paul is also an expert in Warngen and the WSR-88D and has devoted a great deal of time to training the Portland staff.

Hydrometeorology — *John Glueck, WFO Tucson*: John is a highly productive lead forecaster and holds four focal point positions at Tucson and is the Western Region representative on the national climate web page team. John also created a Southeast Arizona Drought Monitoring web page that is used by a wide variety of customers.

Leadership — *Robert Tibi, Western Region Headquarters*: Bob has demonstrated substantial and innovative achievements in the area of hydrology and climate, which has resulted in helping the NWS meet NOAA's strategic goals. Bob's ability in mentoring has directly resulted in building strong future leaders for the NWS.

Upper Air — *WFO Glasgow*: The office sustained superior results despite significant turnover in personnel and frequent extreme weather conditions during many launches. The office also participated in the experimental balloon program at some sacrifice to their local performance, but they still managed to finish less than two points from the top score.

AROUND THE REGION

WFO Eureka Hosts Operational Staff and Family Appreciation Day Party: The WFO Eureka operational staff and their families were treated to an outdoor party on July 22 to honor their hard work around the clock and throughout the year. The party was held on the lawn of the Woodley Island Marina across the street from the forecast office. Lunch included hamburgers, hot-dogs, fresh local salmon (barbequed by chef Troy Nicolini), and a number of homemade side dishes and salads. Games of frisbee, bocce ball, and pickup soccer were ongoing throughout the afternoon, and Bill Dean offered rides in the Bay on his fishing boat. MIC Nancy Dean personally covered shift time for operational staff on duty that day, so they could join in the feast and the festivities. Many thanks go out to Nancy and the inspired party committee, consisting of Troy Nicolini, Debbie Richie, and Mike Colby.

Glasgow Staff Attend Safety and Diversity Training: Twice a year, the staff at WFO Glasgow are invited by the DOE Western Area Power Administration in Fort Peck to attend safety and diversity training. This year, several staff members took advantage of the offer and attended two of the sessions. The first was a 4-hour safety training session done by "Save A Back" from Las Cruces, New Mexico. The instructor, a certified physical therapist for nearly 20 years, showed WAPA and NWS staff how to best lift heavy items, things to avoid doing while lifting, and strengthening exercises to prevent back injuries. On average, back injuries cost employers $20,000 in lost time, injury claims and litigation. The second training session was a diversity session that focused on relationships with Tribal Nations and creating partnerships with them. This presentation was done by Larry Keown of LDK Associates.

METEOROLOGICAL SERVICES DIVISION

Statement of the Week: This week's Statement of the Week is a Red Flag Warning (RFW) issued by Randy Settje of WFO Elko. Randy's warning met all the format requirements of NWSI 10-401, including using both geographical and geopolitical descriptors. Using both types of aerial descriptors is vital in relaying this critical information to local and non local fire crews who are dispatched into unfamiliar country.

The red flag warning verified with several RAWS stations reporting humidity less than 15 percent and gusty winds from 35 to 45 mph. Thanks Randy and the rest of the Elko forecast staff that provided warning support during this red flag episode.

WWUS85 KLKN 051418
RFWLKN

RED FLAG WARNING
NATIONAL WEATHER SERVICE ELKO NV
730 AM PDT THU AUG 5 2004

NVZ451-452-454-455-457-052330-

...RED FLAG WARNING TODAY FROM NOON PDT UNTIL 10 PM PDT FOR GUSTY WINDS AND LOW RELATIVE HUMIDITIES FOR CENTRAL AND NORTHERN NEVADA...

451 - HUMBOLDT COUNTY
452 - ELKO COUNTY AND NORTH OF I80 IN LANDER AND EUREKA COUNTIES
454 - LANDER AND EUREKA COUNTIES BETWEEN I80 AND HIGHWAY 50
455 - WHITE PINE COUNTY
457 - NORTHERN NYE COUNTY AND SOUTH OF HIGHWAY 50 IN LANDER AND EUREKA COUNTIES

DISCUSSION...THE NATIONAL WEATHER SERVICE CONTINUES THE RED FLAG WARNING FOR CENTRAL AND NORTHERN NEVADA TODAY FROM NOON PDT UNTIL 10 PM PDT FOR GUSTY SOUTHWEST WINDS AND LOW RELATIVE HUMIDITIES. A LOW PRESSURE SYSTEM OVER THE PACIFIC NORTHWEST WILL BRING SOUTHWEST WINDS OF 15 TO 25 MPH WITH GUSTS TO 40 MPH BY NOON TODAY AND THE GUSTY WINDS WILL CONTINUE THROUGH 10 PM THIS EVENING. RELATIVE HUMIDITIES WILL FALL BELOW 15 PERCENT AND COMBINE WITH VERY LOW FUEL MOISTURES TO CREATE HAZARDOUS FIRE WEATHER CONDITIONS.

FIRE CREWS AND OFFICIALS IN THE WARNING AREA SHOULD BE PREPARED FOR HAZARDOUS FIRE WEATHER CONDITIONS THIS AFTERNOON AND EVENING. PLEASE ADVISE THE APPROPRIATE OFFICIALS OR FIRE CREWS IN THESE AREAS OF THIS RED FLAG WARNING.

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SETTJE

Watch by County and VTEC Testing on the Way: Nine WR WFOs will participate in Watch by County (WBC) and VTEC Operational Testing and Evaluation (OT&E) beginning August 30. WFOs Boise, Great Falls, Billings, and Glasgow will formally test Watch by County products, while Flagstaff, Phoenix, Tucson, Las Vegas, San Diego,

and Boise (again) will be the VTEC test sites. The offices will be testing the output from all three warning production software suites (WWA, Riverpro, Warngen) to make sure the NWS is ready to implement WBC and VTEC in February 2005. These offices must have AWIPS OB3.3 installed by August 20, so that their software configurations can be verified remotely before the test begins.

Beginning August 30, each test site will "turn on the switch" to start sending VTEC codes within operational watch/warning/advisory products, and they will also issue experimental Watch County Notification (WCN) messages should a convective watch occur within their area. Both groups of offices will participate in a test convective watch with the Storm Prediction Center in late September to make sure WCNs are thoroughly tested. In addition, the VTEC test offices will be asked to issue a series of test products for "out of season" events. The Test Review Group will monitor each product to make sure proper VTEC coding and product format are generated.

A full test plan, test schedules, scenarios to be used in testing, and other software information are expected to be received from NWSH by the end of this week (August 13). WR MSD will package all the information together and forward it to the test sites as soon as it is received. Please contact Craig Schmidt (801.524.4000) if you have any questions.

WFO Flagstaff Participates in School-Met II Workshop at Northern Arizona University: Mike Staudenmaier (SOO, WFO Flagstaff) was a co-developer and lead instructor at a week long professional development workshop at Northern Arizona University on July 19-23. This workshop is one in a series of professional development workshops aimed at allowing secondary school teachers involved with the Northern Arizona Mesonet (NAM) project to develop an understanding of concepts in meteorology, with an emphasis on developing curriculum to implement in secondary school classrooms. This workshop will be followed by two additional workshops this winter and next spring to further develop these introductory concepts and curriculum development. Participating teachers will receive three credits toward continuing education. Previously, similar workshops were provided for participating teachers in the School-Met I project during the 2002-2003 school year.

Presentations were made on a variety of topics, including Basic Meteorological Concepts, Air Masses and Fronts, Clouds and Thunderstorms, The North American Monsoon, Winter Storms, Precipitation, Drought, and Flash Floods. Inquiry-based activities, class discussions, group projects, and field trips were also developed based on these presentations. Additionally, teachers were introduced to the weather station platforms and software that will be used for the NAM Project. The NAM project was initiated in 2000 with several weather stations installed in the city of Flagstaff. This project, a partnership between NOAA/NWS and Northern Arizona University, has now grown to include 12 schools across northern Arizona, including some on the Navajo and

Hopi reservations. Two successful grants totaling over $80,000 have been acquired for the project. The overall project is aimed at installing campus-based meteorological stations to facilitate technology-based instruction in meteorology and increase the number of observation points in data sparse regions of WFO Flagstaff's County Warning Area by targeting secondary schools in communities with traditionally undeserved populations. The School-Met workshops are one facet of this project.

WFO Salt Lake City Receives Positive Feedback on Grand Staircase National Monument Flash Flood: The images here show the aftermath of a flash flood that occurred on the Cottonwood Canyon and Paria River drainages, located in Grand Staircase National Monument in southern Utah, during the afternoon of July 14. As the photos show, this flash flood caused considerable damage across the road. A 4 foot metal culvert was washed away and has not yet been located. WFO Salt Lake City issued a flash flood warning for this event, providing 25 minutes of lead time. Rainfall amounts in the area were recorded near 1.3 inches per hour.

Following this event, Salt Lake City forecaster Brian McInerney gave a flash flood presentation at the Grand Staircase National Monument visitor center (located in Kanab, Utah) on July 22. Local National Park Service staff and approximately 20 residents from Kanab attended. One of these attendees indicated that her daughter was riding with 4 other students and an instructor on a geology field trip in the area on the day of the event. They were traveling along the road in these photos (car shown in the first photo shows the size of the gap) and received a call via radio that the NWS had issued a flash flood warning and suggested they turn back. They heeded the advice and turned around. These images show the road they were on. She indicated they typically drive 50 to 60 mph in this area, and they might not have seen the gap and possibly driven into it had they not received the warning. She passed along her thanks to the WFO Salt Lake City staff for their service.

WFO San Diego Provides Tour for a Pair of Local Residents: WFO San Diego Lead Forecaster Mark Moede provided a tour to San Diego area residents Pat McKay and her nephew, Justin Massa, on August 5. During the tour, Mark gave Justin a presentation about the National Weather Service and provided him a "career guide to meteorology" (both locally developed by San Diego Forecaster Miguel Miller).

HYDROLOGY AND CLIMATE SERVICES DIVISION

Glasgow Achieves National Upper Air Status: Congratulations to WFO Glasgow for their excellent Upper Air program. Glasgow was rated number one in the nation for

July. Their 12 month average score places them at number 5 out of 92 sites. Thanks for a job well done!

SCIENTIFIC SERVICES DIVISION

New Western Region Technical Attachment: Another new Western Region Technical Attachment, which many of you may find interesting, may be found on the Western Region Home page at http://www.wrh.noaa.gov under On-Line Publications. It is:

- A Procedure for Forecasting Dry Thunderstorms in the Great Basin Using the Dynamic Tropopause and Alternate Tools for Assessing Instability
  By Jim Wallman, WFO Reno, NV

DGEX is Here: The IFPS Science Steering Team (ISST) has been working with NCEP and OST to produce a better set of downscaled model based grids that can be used as a first guess fields for days 4-7 of the IFPS forecast grids. The project is called Downscaled GFS with Eta Extension (DGEX) and is the first step of several planned to provide a better suite of downscaled model grids. The DGEX data sets are now part of AWIPS OB 3.3. Stephen Jascourt is working on a teletraining session to explain DGEX. Tim Barker (SOO-Boise) has developed a set of baseline Smart-Init tools for DGEX. This effort was lead by the ISST. Mark Jackson (SOO-Salt Lake City) is the WR representative, and Brad Colman (SOO-Seattle) is the team leader.

New Learning Management System (LMS) E-learning Library Access: All Western Region employees now have access to the NETg and Free Course libraries in the DOC/NOAA/NWS LMS. Access to the libraries may be found at: http://e-learning.doc.gov/noaa/. If you have difficulty signing onto the site, please contact your SOO or DOH for the correct initial log-in and password. Employees will have access to these libraries through May 31, 2005.

WES TA-Lites: The majority of the summer Weather Event Simulator (WES) TA-Lites have been posted to the Western Region Home page and may be found at: http://www.wrh.noaa.gov under On-Line Publications. You are encouraged to check these out to see what your regional counterparts are choosing for WES training exercises and if they may be useful in your own office training.

Teletraining Sessions for August: The Virtual Institute for Satellite Integration Training (VISIT) and the Integrated Sensor Training Professional Development Series (ISTPDS) sessions for August are listed below. Offices can register for the teletraining sessions by sending email to: visit@comet.ucar.edu. The teletraining calendar is at: http://www.cira.colostate.edu/ramm/visit/ecal.asp.

The sessions currently scheduled for August are:

- NEW - QuikSCAT Winds
  (Basic, Aug 3,12,17,25)
- Forecasting Convective Downburst Potential Using GOES Sounder Derived Products
  (Basic, Aug 10)
- Interactive Cloud Height Algorithm and GOES Sounder Point Retrievals in AWIPS

(Basic, Aug 4,24)
- Water Vapor Channel Satellite Imagery (Basic, Aug 9)
- Lightning Meteorology I (Basic, Aug 11)
- Lightning Meteorology II (Advanced, Aug 12)
- The Enhanced-V: A Satellite Severe Storm Signature (Basic, Aug 23)

All sessions can be reviewed in advance by following the instructions in the student guides available on the ISTPDS/VISIT page at: http://www.cira.colostate.edu/ramm/visit/visithome.asp.

North American Monsoon Experiment (NAME): The North American Monsoon Experiment is underway. The NAME Forecast Operations Center is issuing guidance forecasts for the Tier-I region in northwest Mexico and the Southwest U.S. The Extended Observational Period (EOP) is underway and will continue through August 31.

Details on the experiment, including the daily forecast guidance for the NAME decision makers, can be found at: http://www.joss.ucar.edu/name.

Eighth Annual Great Divide Weather Workshop: The Eighth Annual Great Divide Weather Workshop will be held September 8-10 in Billings, Montana. The time for the workshop is quickly approaching. If you are still interested in attending or presenting, some key deadlines are approaching.

The workshop will be held at the Sheraton Hotel in downtown Billings (Phone:1-800-588-7666). A block of rooms has been secured at a rate of $55.00 per night by mentioning the National Weather Service. **Reservations must be made by August 23 to ensure this rate.** The hotel will provide complimentary transportation to and from the airport. A courtesy phone located at the baggage claim at the airport to arrange transportation with the hotel.

If you plan on attending or presenting at the workshop please RSVP to Byz.Great.Divide.Workshop@noaa.gov. Please note if you will be attending the banquet which is scheduled for the evening of September 9 at the hotel. The banquet will be a buffet style. The menu is posted on the workshop website at http://www.wrh.noaa.gov/Billings/GreatDivide.shtml. Cost for the buffet will be $20, which will be collected during registration the first day of the workshop.

The scheduled key note speaker for the banquet will be Michael J. Hayes from the National Drought Mitigation Center. Mike will present a pictorial look at drought across the country.

Billings is requesting that topics or abstracts be sent to the workshop via email by August 15, 2004 to ensure inclusion in the workshop preprint.
If you have questions, please contact William Rasch at 406-652-0851 or fax 406-652-3214.

Advanced Warning Operations Course (AWOC): The dates for the "train the facilitator" portion of AWOC have been set. Each WFOs/RFCs has been assigned one slot for the SOO/DOH or radar focal point to attend the one week facilitator course at the WDTB in Norman OK. The AWOC course dates are:

August 3-5, 2004
August 17-19, 2004
August 24-26, 2004
August 31-Sep 2, 2004
Sep 14-16, 2004
Sep 21-23, 2004
October 13-14, 2004 — for DOHs only

AWOC Course Description: The Advanced Warning Operations Course (AWOC) will initially consist of two tracks: Core Track and Severe Weather Track. There will be a Winter Weather track added to the end of the course. Each track contains approximately 14 hours of training material (includes evaluation components). The course will be facilitated on site by an onsite facilitator (SOO, DOH, or locally appointed training officer). This facilitator will participate in a workshop in Norman, OK in August or September 2004. The AWOC will begin in October 2004 and will include a combination of distance learning technologies including teletraining, web-based training, computer-based training on CD-ROM, Weather Event Simulator (WES) simulations, and printed material. The course is designed to allow every NWS Forecaster (Meteorologist and Hydrologist) to participate. Each instructional component as described below will include a separate evaluation component that will be tracked by the AWOC on-site facilitator. Pre-test options will be available for many of the instructional components.

Facilitator Workshop
The facilitator workshop will help develop a partnership between the WDTB and the AWOC on-site facilitator (one person from each office) who together will deliver the AWOC training. The attendee will become familiar with the roles and responsibilities of the WDTB and the on-site facilitator. The purpose and content of the course will be presented. A means by which to keep track of students and their progress will be discussed. Simulations will be an integral part of AWOC. The on-site facilitator will administer the simulations, choosing from several provided by WDTB or from locally developed simulations. The workshop will include instruction on simulation theory and tools, including evaluation techniques, for more effective delivery of simulations.

AWOC Core Track
1. Decision Making in a Warning Environment Brief Description:
   The content will focus on various aspects of decision making as it pertains to the operational warning environment. This will include the three levels of situation awareness and how they are accounted for in the warning process. In addition, the meaning and value of expertise, as well as strategies for acquiring it, will be presented.
   Delivery Methods: Teletraining, printed materials, and web support materials
   Approximate Completion Time: 4 hours

2. Effective Office Warning Strategies Brief Description:
   The content will focus on putting together strategies which will allow the decision maker to make the best use of their skills and those of the warning team. This will include ways to manage workload and heighten communication. The benefits and challenges of coordination both within the office and with external partners will be illustrated.
   Delivery Methods: Teletraining, printed materials, and support materials
   Approximate Completion Time: 2.5 hours

3. Data Quality Brief Description:
   Radar, satellite, radar/satellite integration, ground truth and VCP Explorer are some of the topics that will be covered in this block. Emphasis will be on the impacts of poor data quality, strengths and limitations of various sensors, and optimum utilization of the various sensors to improve/mitigate data quality issues. Delivery Methods: CD and web module
   Approximate Completion Time: 2.5 hours

4. Societal Impacts and Public PerceptionBrief Description:
   This instructional component will explore the place of weather warnings in a sociological context, and identify elements of an effective warning.
   Delivery Methods: web module
   Approximate Completion Time: 2.5 hours

AWOC Severe Weather Track

1. Conceptual Models for Origins and Evolutions of Convective Storms and Systems Brief Description:
   Content will focus on recent (1994- present) research on conceptual models that describe important processes in convective storms or storm systems. Formation mechanisms and environmental parameters for supercell and squall line tornadoes, hail, high winds (wet and dry microbursts, bow echoes, derechos), and flash flooding (meteorological considerations) will be described.
   Delivery Methods: web module
   Approximate Completion Time: 2 hours

2. Mesoanalysis for the Warning Forecaster Brief Description:
   This component will identify products and procedures for effective data analysis in completing short-term forecast job tasks (i.e., what a mesoanalysist should do in a severe weather warning methodology).
   Delivery Method: web module
   Approximate Completion Time: 1.5 hours

3. Storm Interrogation Strategies Brief Description:
   Topics in this section include methods to determine the qualitative strength of an updraft and its relation to most severe weather reports, techniques to determine the updraft location for sheared storms, and identifying characteristics of tornadoes, flash floods, hail, and damaging winds.
   Delivery Method: web module
   Approximate Completion Time: 2.5 hours

4. Application and Review of AWOC Severe Weather Track Brief Description:
   This instructional component will use a case or two to review and illustrate the important considerations that a warning forecaster should apply in an effective warning methodology. This review will include components of threat assessment and storm interrogation strategies.
   Delivery Methods: Teletraining and a printed student guide.
   Approximate Completion Time: 1.5 hours

5. Simulations Brief Description:
   Four simulations, complete with simulation guides, will be released with the AWOC. SOOs may choose to use these simulations as the simulations in the AWOC, or they may use them as a reference to develop their own local simulations for AWOC. The simulations in the AWOC can be used to fulfill the annual WES requirement of two simulations for the convective season.
   Delivery Methods: Weather Event Simulator (WES) data with supporting simulation guides.
   Approximate Completion Time: 5 hours (2.5 hours per simulation with 2 simulations

SYSTEMS OPERATIONS DIVISION

AWIPS Systems Plans: WFOs Reno and Boise are beta testing AWIPS Operational Build 4 (OB4) this week. Field installation of OB4 should begin September 23 if testing is successful. The operational acceptance test (OAT) for the AWIPS Linux-based DS1 Replacement is scheduled for October. A decision on the 12 sites who will participate in the OAT has not yet been finalized. The target for replacement of the DS hardware at all field offices is February 2005.

The ROC: Son Nguyen visited the Radar Operation Center in Norman, Oklahoma. Son worked with the ROC technicians at the hotline and also spent time working on the Radar.

Intro to Unix: The introduction to Unix class was held this week in Sandy, UT, and the training was provided by the Salt Lake Community College. This class was attended by Electronics Technicians and Meteorologists.

AC Upgrade at Promontory: Two new 6 ton AC units were taken to Promontory Point Utah on Tuesday, August 10, in preparation for the install. The installation of the new AC units was completed on Wednesday by Lee Jenson, Tom Page, and Randy Miller.

New UPS: A new Mitsubishi UPS was installed at the Glasgow WFO by Lee Jenson and Mike Hume. The install began on August 3 and was completed by August 5.